

**Flood Control Project Maintenance
Levee Inspections**

Fall 2012 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

RD1660	Overall LMA Rating	Total LMA Miles						
Reclamation District No. 1660 Tisdale	A	12.14						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Encroachments	0.01		0.01	0.08%	0.66			
Slope Stability	0.05		0.05	0.41%				
<i>Supplemental</i>								
USACE Erosion Survey	0.03		0.03	0.25%				
<i>LMA Totals:</i>	0.09	0.00	0.09	0.74%	0.66	0.00	0.00	0.00

Unit No. 01 Sacramento River LB	Overall Unit Rating	Total Unit Miles						
RD1660	A	3.00						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Encroachments	0.01		0.01	0.33%	0.66			
Slope Stability	0.05		0.05	1.67%				
<i>Supplemental</i>								
USACE Erosion Survey	0.03		0.03	1.00%				
<i>Unit Totals:</i>	0.09	0.00	0.09	3.00%	0.66	0.00	0.00	0.00

Unit No. 02 Sutter Bypass RB	Overall Unit Rating	Total Unit Miles						
RD1660	A	9.14						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
No Items								
<i>Unit Totals:</i>	0.00	0.00	0.00	0.00%				

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2012 Levee Inspection Results

Reclamation District No. 1660 Tisdale

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			A	

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 1660 Tisdale

Waterway			Bank	Unit Miles
Unit No. 01 Sacramento River			Left	3.00
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	03/27/2012 - 03/27/2012		11/29/2012 - 11/29/2012	
DWR Inspector	Bob Duffey		Bob Duffey	
Accompanied By	Ron Long		Andy Duffey	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 1660 Tisdale

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River						Left	3.00	11/29/2012 11/29/2012	Bob Duffey

LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
1			Earthen Levee	Operations & Maintenance Manuals	LS	A Ma		°	°	13
DWR ID: DWR_RD1660_01_s_2012_13										
2			Earthen Levee	Emergency Supplies & Equipment	LS	A Ma		°	°	14
DWR ID: DWR_RD1660_01_s_2012_14										
3			Earthen Levee	Flood Preparedness & Training	LS	A Ma		°	°	15
DWR ID: DWR_RD1660_01_s_2012_15										
4	0.05	0.05	Earthen Levee	Encroachments	LS	M En	BU : Building	39.062643 ° -121.837857 °	39.062643 ° -121.837857 °	12 Y
DWR ID: DWR_RD1660_01_s_2012_12										
5	0.08	0.10	Earthen Levee	Animal Control	LS	A/W Ma	A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	39.062208 ° -121.837889 °	39.061823 ° -121.837927 °	8 Y
DWR ID: DWR_RD1660_01_s_2012_8										
6	0.86	0.86	Earthen Levee	Vegetation	LS	A Ma	V1 : Control annual grass and weeds on the levee slopes and easements.	39.051196 ° -121.839678 °	39.051196 ° -121.839678 °	16 Y
DWR ID: DWR_RD1660_01_f_2012_16										
7	1.12	1.43	Earthen Levee	Encroachments	LS	M En	DT : Ditch	39.047610 ° -121.838802 °	39.043622 ° -121.836445 °	9 Y
DWR ID: DWR_RD1660_01_s_2012_9										
8	1.32	1.35	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2009 - Erosion on levee toe where an old cobble site is failing. 2011 - Some new minor erosion. 2012: Site extended downstream, bank is negatively being impacted from the weight of the trees. [2012 Site ID: SAC_120-6_L]	39.044361 ° -121.837654 °	39.043916 ° -121.837305 °	11 Y
DWR ID:										
9	2.04	2.38	Earthen Levee	Encroachments	LS	M En	DT : Ditch	39.037640 ° -121.828421 °	39.034416 ° -121.825698 °	1 Y
DWR ID: DWR_RD1660_01_s_2012_1										
10	2.42	2.42	Earthen Levee	Slope Stability	LS	M Ma	S1 : Repair slope instability.	39.034107 ° -121.825152 °	39.034107 ° -121.825152 °	2
DWR ID: DWR_RD1660_01_s_2012_2										
11	2.44	2.44	Earthen Levee	Slope Stability	LS	M Ma	S1 : Repair slope instability.	39.033858 ° -121.824985 °	39.033858 ° -121.824985 °	4
DWR ID: DWR_RD1660_01_s_2012_4										
12	2.62	2.62	Earthen Levee	Animal Control	LS	A/W Ma	A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	39.031520 ° -121.823420 °	39.031520 ° -121.823420 °	10 Y
DWR ID: DWR_RD1660_01_s_2012_10										
13	2.63	2.63	Earthen Levee	Encroachments	LS	M Ma	EQ : Equipment	39.031405 ° -121.823403 °	39.031405 ° -121.823403 °	3 Y
DWR ID: DWR_RD1660_01_s_2012_3										
14	2.68	2.71	Earthen Levee	Slope Stability	LS	M Ma	S1 : Repair slope instability.	39.030891 ° -121.822956 °	39.030436 ° -121.822617 °	5
DWR ID: DWR_RD1660_01_s_2012_5										

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	3.00	11/29/2012 11/29/2012	Bob Duffey

Levee Mile Report Line	4
Start Levee Mile	0.05
End Levee Mile	0.05
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the building and fence at the landside toe.

rduffey_f_20120911_261.jpg



Levee Mile Report Line	5
Start Levee Mile	0.08
End Levee Mile	0.10
Location	Land Side
Category	Earthen Levee
Item	Animal Control

View of the repaired rodent holes along the landside slope of the levee.

rduffey_f_20121205_420.JPG



Levee Mile Report Line	6
Start Levee Mile	0.86
End Levee Mile	0.86
Location	Land Side
Category	Earthen Levee
Item	Vegetation

View of the vegetation starting to grow on both slopes of the levee.

rduffey_f_20121205_421.JPG



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	3.00	11/29/2012 11/29/2012	Bob Duffey

Levee Mile Report Line	7
Start Levee Mile	1.12
End Levee Mile	1.43
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the ag ditch along the L/S toe.

rduffey_f_20120911_258.jpg



Levee Mile Report Line	8
Start Levee Mile	1.32
End Levee Mile	1.35
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2012 Photo #1

USACE2012_SAC_120-6_L_1.jpg



Levee Mile Report Line	8
Start Levee Mile	1.32
End Levee Mile	1.35
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2012 Photo #2

USACE2012_SAC_120-6_L_2.jpg



* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	3.00	11/29/2012 11/29/2012	Bob Duffey

Levee Mile Report Line	8
Start Levee Mile	1.32
End Levee Mile	1.35
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2012 Photo #3

USACE2012_SAC_120-6_L_3.jpg



Levee Mile Report Line	9
Start Levee Mile	2.04
End Levee Mile	2.38
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of the large ditch along the landside toe.

rduffey_f_20120911_255.jpg



Levee Mile Report Line	12
Start Levee Mile	2.62
End Levee Mile	2.62
Location	Land Side
Category	Earthen Levee
Item	Animal Control

View of rodent holes along the L/S slope.

rduffey_f_20120911_259.jpg

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Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	3.00	11/29/2012 11/29/2012	Bob Duffey

Levee Mile Report Line	13
Start Levee Mile	2.63
End Levee Mile	2.63
Location	Land Side
Category	Earthen Levee
Item	Encroachments

View of equipment along the slope.

rduffey_f_20120911_256.jpg



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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 1660 Tisdale

Waterway			Bank	Unit Miles
Unit No. 02 Sutter Bypass			Right	9.14
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	03/27/2012 - 03/27/2012		11/29/2012 - 11/29/2012	
DWR Inspector	Bob Duffey		Bob Duffey	
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Unit No. 02 Sutter Bypass							Right	9.14	11/29/2012 11/29/2012	Bob Duffey
LMR No.	Levee Mile		Category	Item	* Location	Rating +/-	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
1			Earthen Levee	Operations & Maintenance Manuals	LS	A Ma		° °	° °	8
DWR ID: DWR_RD1660_02_s_2012_8										
2			Earthen Levee	Emergency Supplies & Equipment	LS	A Ma		° °	° °	9
DWR ID: DWR_RD1660_02_s_2012_9										
3			Earthen Levee	Flood Preparedness & Training	LS	A Ma		° °	° °	10
DWR ID: DWR_RD1660_02_s_2012_10										
4	0.93	0.97	Earthen Levee	Animal Control	LS A/W Ma	A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	39.045810 ° -121.748792 °	39.046332 ° -121.749000 °	3 Y	
DWR ID: DWR_RD1660_02_s_2012_3										
5	1.55	1.55	Earthen Levee	Animal Control	WSA/W Ma	A1 : Exterminate rodents and backfill and compact or grout burrows. Inspector Comments: Beaver holes were repaired by District.	39.054290 ° -121.752319 °	39.054290 ° -121.752319 °	7 Y	
DWR ID: DWR_RD1660_02_s_2012_7										
6	1.57	1.61	Earthen Levee	Animal Control	LS A/W Ma	A1 : Exterminate rodents and backfill and compact or grout burrows.	39.054595 ° -121.752460 °	39.055170 ° -121.752698 °	4 Y	
DWR ID: DWR_RD1660_02_s_2012_4										
7	5.07	5.07	Earthen Levee	Animal Control	WSA/W Ma	A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	39.102052 ° -121.774477 °	39.102052 ° -121.774477 °	6 Y	
DWR ID: DWR_RD1660_02_s_2012_6										
8	5.81	5.81	Earthen Levee	Vegetation	LS Ma	A V1 : Control annual grass and weeds on the levee slopes and easements.	39.109310 ° -121.784250 °	39.109310 ° -121.784250 °	5 Y	
DWR ID: DWR_RD1660_02_f_2012_5										

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.14	11/29/2012 11/29/2012	Bob Duffey

Levee Mile Report Line	4
Start Levee Mile	0.93
End Levee Mile	0.97
Location	Land Side
Category	Earthen Levee
Item	Animal Control

View of rodent holes along the L/S slope.

rduffey_f_20120911_262.jpg



Levee Mile Report Line	4
Start Levee Mile	0.93
End Levee Mile	0.97
Location	Land Side
Category	Earthen Levee
Item	Animal Control

View of the repaired rodent holes on the landside slope.

rduffey_f_20121205_422.JPG



Levee Mile Report Line	5
Start Levee Mile	1.55
End Levee Mile	1.55
Location	Water Side
Category	Earthen Levee
Item	Animal Control

View of the repaired rodent holes on the landside slope of the levee.

rduffey_f_20121205_424.JPG



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.14	11/29/2012 11/29/2012	Bob Duffey

Levee Mile Report Line	6
Start Levee Mile	1.57
End Levee Mile	1.61
Location	Land Side
Category	Earthen Levee
Item	Animal Control

View of the repaired rodent holes on the landside slope of the levee.

rduffey_f_20121205_425.JPG



Levee Mile Report Line	7
Start Levee Mile	5.07
End Levee Mile	5.07
Location	Water Side
Category	Earthen Levee
Item	Animal Control

View of the repaired rodent hole on the waterside slope.

rduffey_f_20121207_437.JPG



Levee Mile Report Line	8
Start Levee Mile	5.81
End Levee Mile	5.81
Location	Land Side
Category	Earthen Levee
Item	Vegetation

View of the vegetation start to grow on both levees.

rduffey_f_20121205_426.JPG



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